HAZARDOUS WASTE
COMPLIANCE ASSESSMENT REPORT

FILE COPY

TO: Karen G. J'Anthony KGJA

FROM: Alan H. Simpson AHS

SUBJECT: CA at Procino Plating, Inc., Blades, Delaware on September 24, 1998

REFERENCE: DED982362543, File Code: 21

DATE: October 20, 1998

GENERATOR SITE ADDRESS: 901 S. Market Street
Blades, Delaware 19973

GENERATOR MAILING ADDRESS: Same As Site Address

SITE REPRESENTATIVES: Patrick Procino, President and Owner
Michael Procino, Vice President
(302) 629-0331

HWMB REPRESENTATIVES: Alan H. Simpson, Robert R. Palmer, and Bruce B. Cole

DATE OF ASSESSMENT: September 24, 1998

PURPOSE OF ASSESSMENT: Compliance Assessment

FACILITY STATUS: Large Quantity Generator based on 1996 through 1998 manifests. The latest notification (2/8/90) claimed a small quantity generator status.

PRE-ASSESSMENT SAFETY PREPARATION

Based on what I know about the plating industry, I determined that steel toed boots, a hard hat, safety glasses with side shields and a photoionization detector were adequate safety equipment.

FACILITY DESCRIPTION

Procino Plating is located on Market Street in Blades, Delaware. Typical of a plating plant, Procino plates copper, nickel, aluminum and chromium onto metal objects.

Business is by contracts from large companies as well as for one-time customers. Residential houses are across one street adjacent to Procino.

NEW PRE-TREATMENT PLANT

An October 17, 1995 Notice of Violation was issued to Procino for:

- treating hexavalent chromium hazardous waste by chemically reducing it with sodium metabisulfile; and
- treating cyanide hazardous waste by chemically oxidizing it with hypochlorite.

The company had no treatment permit for these processes and neither process could qualify for a permit exemption (see Precipitation of Chromic Hydroxide and Cyanide Oxidation Section in my September 8, 1995 Compliance Assessment Report for a full regulatory evaluation of these two processes.). Also, the company was neutralizing acidic nickel and copper hazardous wastes. However, we judged these treatments were taking place inside an elementary neutralization tank.

The result of our Notice of Violation was a December 11, 1995 letter from Procino containing statements that they would cease onsite treatment of chrome and cyanide hazardous wastes. During my September 24, 1998 assessment, in fact, I observed that the tank where cyanide and chromium treatment had taken place, was gone.

Also, during the assessment, I observed that the company had installed and constructed sixteen (16) new processing units. According to Mike Procino, these were put into operation the summer of 1996. These units are utilized to treat hazardous wastes prior to their discharge into the municipal sewer. The same treatment of chromium, cyanide, nickel and copper wastes are carried out in this wastewater treatment plant as had been carried out in the single tank that had been cited in the 1995 Notice of Violation. Further, I saw that there is hard piping between all the units in the treatment plant and all the units, except for the filter press, obviously meet the §260.10 definition of tank. In addition, there is no accumulation of hazardous waste upstream of the units. Therefore, all that goes on in these units, including the treatment of cyanide and chromium hazardous waste, has a §122.1(a)(2)(v) permit exemption because these units are wastewater treatment units.

FILTER PRESS AS A WASTEWATER TREATMENT UNIT

During late 1995, Procino Plating proposed the installation of a wastewater treatment system to treat plating rinse and bath solutions as wastewaters. Nancy C. Marker's March 19, 1996 letter to Patrick Procino explained that in order for a unit to obtain the §265.1(c)(9) wastewater unit permit exemption, the unit must have three characteristics. One of these characteristics was that the unit be a tank. Because a filter press is not usually thought of as a tank, the letter specifically explained how a filter press could obtain the wastewater treatment unit permit exemption.

The September 24, 1998 assessment revealed that part of the wastewater treatment system installed was indeed, a filter press. Patrick Procino had installed this filter press without a RCRA treatment permit under the assumption that the filter press was a wastewater treatment unit.

I also conclude that the filter press is a wastewater treatment unit, and therefore, no RCRA permit was required for its installation and operation. This conclusion is based on the following:

1. The filter press is part of a wastewater treatment system that discharges wastewater directly to a municipal sewer.

2. The function of the filter press is to clean the wastewater for its discharge.

3. The filter press is a tank which it must be in order to be a wastewater treatment unit. A July 31, 1981 EPA letter from John P. Lehman to Richard Boynton that "the definition of 'tank' [as used in the definition wastewater treatment units] is rather broad, covering the unit operations which are not obviously tanks such as presses, filters, sumps, and many other types of processing equipment". A January 2, 1986 EPA letter from J. Winston Porter to C.T. Phillip confirms this interpretation. Further, a May 1984 RCRA Hotline Monthly Summary concludes that because a filter press might not be a stationary device, does not prohibit it from being a wastewater treatment unit.

I would find no HWMB precedents on the subject of filter presses qualifying as wastewater treatment units. Two HWMB letters sent to Occidental Chemical Corporation (May 19, 1988 and January 12, 1996) address filter presses that are part of a brine recovery system (K071) rather than a wastewater treatment system (K106). Therefore, these filter presses could not qualify as wastewater treatment units because they did not treat wastewater.

COLLECTING F006 FILTER CAKE

When F006 filter cake is first removed from the filter press that is part of the wastewater treatment system, the filter cake is collected inside a woven shipping bag which is under the filter press. The bag is protected by its being inside a metal tote (see photograph). Once filled, this bag is removed and becomes the F006 accumulation and shipping container. I have concluded that this collection bag is a hazardous waste accumulation area and must meet the requirements of a hazardous waste accumulation area. The bag does not fall within any of the exemptions provided by the DRGHW:

- the wastewater treatment unit §122.1(a)(2)(v) exemption does not apply because the bag is the container in which the F006 is shipped offsite. Therefore, the bag is not a tank, and therefore, not a wastewater treatment unit. Further, a collection bag is removed when filled and its removal does not cause the operation of the filter press to be interrupted. Therefore, the bag is separate from (i.e., not part of) the filter press, and therefore, does not gain the wastewater treatment exemption allowed to the filter press;

- the total enclosed treatment unit §122.1(a)(2)(iv) exemption does not apply because neither the collection bag nor the filter press is directly connected to an industrial production process as required by the §260.10 definition of totally enclosed treatment unit; and

- not a waste until the material is removed from the unit §261.4(c) exemption does not apply because the filter press unit is not a product or raw material storage tank or is not a non-waste treatment manufacturing unit.

Therefore, the filter cake collection bag was assessed as a hazardous waste accumulation area (see 90 day area checklist).

SEPTEMBER 24, 1998 WALK THROUGH

Robert R. Palmer, Bruce B. Cole and I were accompanied by Patrick Procino and Mike Procino on a walk through of the two buildings and all outside areas. Specifically, we walked through the following areas:

<u>Building #1</u>

- plating room; and
- shipping and receiving room with hazardous waste accumulation areas (see checklist) and where the treatment tank had been.

<u>Building #2</u>

- new wastewater pre-treatment plant; and
- plating area.

<u>Outside</u>

- back to the railroad track property line.

LAND BAN

As part of the September 24, 1998 assessment of Procino Plating, Robert R. Palmer examined this company's past shipping records. The company had copies of land notifications for all the shipments. The notification forms satisfied the requirements of §268.7(a)(1) of the DRGHW.

AIR RESOURCES FILE

The Air Resources Section has no permit file or TRI file for Procino Plating. However, the company's EPCRA report for calendar year 1996 is attached and identifies every plating bath and rinse and every wastewater treatment unit at the facility. A copy of pertinent pages of the EPCRA report is attached to this assessment report.

WASTEWATER DISCHARGE

At my request, Mr. Chris Calio (855-7839) of Sussex County mailed to me copies of the two August 15, 1998 industrial wastewater contribution permits that were issued to Procino Plating. These permits require Procino Plating to sample the discharge monthly and analyze for cadmium, chromium, copper, lead, nickel, silver, zinc and cyanide. Sampling must be over an 8 hour or 24 hour period. The period pollutant limits are the EPA effluent guidelines for the metal finishing industry as published in 40 CFR, §403.12(e).

POLLUTION PREVENTION

I observed no opportunities to recommend pollution prevention activities. Andrea Kreiner had accompanied us during our August 2, 1995 assessment at Procino Plating.

CONCLUSIONS

I found no hazardous waste streams not being managed as hazardous waste.

VIOLATIONS

- one drum of spent solvent and one bag of F006 were not labeled "Hazardous Waste";
- four drums of hazardous waste and one bag of F006 had no start accumulation dates;
- one drum of hazardous waste had a start accumulation date of more than 90 days before the assessment;
- there were no records of weekly inspections of the accumulation areas;
- the contingency plan has no procedure for notifying DNREC of an emergency involving hazardous waste;
- F006 bags do not have markings showing they are DOT approved and the company does not have documentation for a "CC" exemption;
- the company has not renotified as a large quantity generator;
- the company has not submitted an annual generator report since it became a large quantity generator;
- there are no records regarding who attended annual training; and
- there is no list of names of personnel who should attend training.

WASTE GENERATION AND MANAGEMENT AT PROCINO

Inventory of Pre-Cleaners, Plating Baths & Rinses[1]	Expected Characteristics of Waste Streams[2]	Processing of Wastes[3]		Destination of Wastes
Nickel Sulfate (Watts bath)	spent bath has nickel cations in a 3 to 4 pH - non-hazardous	neutralized in the wastewater pre-treatment plant; nickel is filtered out as nickel hydroxide		
Nickel Sulfamate Bath	spent bath has nickel cations in a 3 to 4 pH - non-hazardous	neutralized in the wastewater pre-treatment plant; nickel is filtered out as nickel hydroxide		
Copper Sulfate Bath	spent bath has copper cations in sulfuric acid - hazardous by low pH	neutralized in the wastewater pre-treatment plant; copper is filtered out as copper hydroxide	→	● neutralized solutions are discharged to POTW[3]
Chromic Acid Bath	spent bath has hexavalent chromium and also hazardous by a low pH	placed in a wastewater pre-treatment plant; the pH is lowered to 2 and the sodium metabisulfite is added to change Cr^{+6} to Cr^{+3}. The trivalent chromium precipitates out as a hydroxide.	→	● metal hydroxide sludges are manifested as F006 to World Resources Company.
Acid Strippers	low pH and possible hazardous metal cations	neutralized in the wastewater pre-treatment plant; metal hydroxides precipitate out.		
Copper, Brass and Silver Cyanides	spent bath has cyanide anions	mixed with lime and calcium hypochlorite in the wastewater pre-treatment plant; this oxidizes the cyanide into non-hazardous chemicals. Metal hydroxides precipitate out.		
Electroless Copper Bath	non-hazardous			

<u>1996 Sources of Information</u>

1. EPCRA Report and my September 24, 1998 assessments
2. Metal Finishing Guidebook and Directory Issue 1993
3. Verbal from Procino or representatives on September 24, 1998

PROCINO
AHS:trh